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		Application Number	10/613,706
		Filing Date	7/3/2003
		First Named Inventor	Gregory J. McRae
		Art Unit	2127
		Examiner Name	Unknown
Sheet 1 of 1		Attorney Docket Number	037010-0106

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
/Lc/	A1	6549854	04-15-2003	Malinverno et al.	

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/Lc/	A2	Richard A. Kilgore, "Open Source Simulation Modeling Language (SML)," Proceedings of the 2001 Winter Simulation Conference, p. 607-613.	

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1	of	3	Application Number	10/613,706	
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/Lc/	A1	6173240		Sepulveda et al.	01-09-2001	

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/Lc/	A2	Adomian, G., Stochastic system analysis, in <i>Applied Stochastic Processes</i> , edited by G. Adomian, pp. 1-17, Academic, San Diego, Calif., 1980			
/Lc/	A3	Cukier, R.I., Fortuin, C.M., Shuler, K.E., Petschek, A.G., and Schaibly, J.H., Study of the sensitivity of coupled reaction systems to uncertainties in rate coefficients, I, Theory, <i>J. Chem. Phys.</i> , 59, 3873-3878, 1973			
/Lc/	A4	Derwent, R.G., Treating uncertainty in models of the atmospheric chemistry of nitrogen compounds, <i>Atmos. Environ.</i> , 21, 1445-1454, 1987.			
/Lc/	A5	Dunker, A.M., The Decoupled Direct Method for calculating sensitivity coefficients in chemical kinetics, <i>J. Chem. Phys.</i> , 81(5), 2385-2303, 1984.			
/Lc/	A6	Gao, D, Stockwell, W.R. and Milford, J.B. "First order sensitivity and uncertainty analysis for a regional scale gas phase chemical mechanism, <i>J. Geophysical Research</i> , 100, 23,153-23,166, 1995.			
/Lc/	A7	Gautschi, W., Algorithm 726: ORTHPOL--A package of routines for generating orthogonal polynomials and Gauss-type quadrature rules, <i>ACM Trans. Math. Software</i> , 20(1), 21-26, 1994.			
/Lc/	A8	Ghanem, R.G. and Spanos, P.D., <i>Stochastic Finite Elements; A Spectral Approach</i> , Springer-Verlag, New York, 1991 p.72-81.			

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/Lc/	A9	Koda, M., McRae, G.J. and Seinfeld, J.H., Automatic sensitivity analysis of kinetic mechanisms, <i>Int. J. Chemical Kinetics</i> , 11, 427-444, 1979.	
/Lc/	A10	Kramer, M.A., Rabitz, H., Calo, J.M., and Kee, R.J., Sensitivity analysis in chemical kinetics: Recent developments and computational comparisons, <i>Int. J. Chem. Kinetics</i> , 16, 559-578, 1984.	
/Lc/	A11	Lax, M.D., Approximate solution of random differential and integral equations, <i>App. Stochastic Process</i> , edited by G. Adomian, pp. 121-134, Academic, San Diego, Calif., 1980.	
/Lc/	A12	McKay, M.D., Beckman, R.J., and Conover, W.J., A comparison of three methods for selecting values of input variables in the analysis of output from a computer code, <i>Technometrics</i> , 21, 239-245, 1979.	
/Lc/	A13	McRay et al., Global sensitivity analysis -- A computational implementation of the Fourier Amplitude Sensitivity Test (FAST), <i>Comp. Chem. Eng.</i> , 6, 15-25, 1982.	
/Lc/	A14	Morgan, M.G., Henrion, M., and Small, M., <i>Uncertainty, A Guide to Dealing with Uncertainty in Quantitative Risk and Policy Analysis</i> , Cambridge University Press, New York, 1992.	
/Lc/	A15	Papoulis, A. <i>Probability, Random Variables, and Stochastic Processes</i> , 3rd Edition, McGraw Hill, NY, 1991.	
/Lc/	A16	Pierce, T.H. and Cukier, R.I., Global Nonlinear Sensitivity Analysis using Walsh functions, <i>J. Comput. Phys.</i> , 41, 427-443, 1981.	

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/Lc/	A17	Pan, W., Tatang, M.A., McRae, G.J. and Prinn, R.G., "Uncertainty Analysis of Direct Radiative Forcing by Anthropogenic Sulfate Aerosols, <i>J. Geophysical Research</i> , 102, (D18), 21,915-21,924, 1997.	
/Lc/	A18	Serrano, S.E. and Unny, T.E., Random evolution equations in hydrogeology, <i>Applied Mathematics and Computation</i> , 39, 97s-122s, 1990.	
/Lc/	A19	Tatang, M.A., <i>Direct Incorporation of Uncertainty in Chemical and Environmental Engineering Systems</i> , Ph.D. Thesis, Department of Chemical Engineering, Massachusetts Institute of Technology, Cambridge, Massachusetts, 1995.	
/Lc/	A20	Tatang, M.A., Pan, W., Prinn, R.G., and McRae, G.J. "An Efficient Method for Parametric Uncertainty Analysis of Numerical Geophysical Models, <i>J. Geophysical Research</i> , 102, (D18), 21,925-21,932, 1997.	
/Lc/	A21	Wiener, N., The homogeneous chaos, <i>Amer. J. Math.</i> , 60, 897-936, 1938.	

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